

- than  $\zeta$ ;  $\theta$  the same as  $\eta$ , but still nearer to the eye;  $\iota$  where  $\eta$  and  $\theta$  merge into one outline;  $\kappa$  the cavity between the outer and inner walls of  $\iota'$ ;  $\lambda$  hollow of the tentacle;  $\mu$  entrance to  $\lambda$ ;  $\sigma$  superior margin of the socket from which  $\iota'$  arises. 200 diameters.
- Fig. 4. The same as fig. 3, but seen from below, with the following additional letters:  $\nu$  the same as  $\lambda$ , but fore-shortened by the curvature of the tentacle;  $\xi$  the inferior margin of the socket from which the tentacle arises;  $\pi$  the broad line of attachment of the veil ( $\iota$ ). 200 diameters.
- Fig. 5. Inferior side of a quarter of figs. 5 and 20 of Pl. XI<sup>b</sup>, principally to show the branching of the radiating canals, the extent of the veil, and the fringes ( $a$ ) of the proboscis. 24 diameters.
- Fig. 6. The fringes ( $a$ ) of the proboscis of fig. 5 in profile.
- Fig. 7. Cells ( $c$ ) and lasso-cells ( $a$   $b$ ) from the upper surface of the disk of fig. 9. 500 diameters.
- Fig. 8. The same as  $d'$  fig. 2, more enlarged.  $a$  entrance;  $\beta$  dorsal side toward the outer veil;  $\gamma$  profile of the wall at the dorsal side of the bend;  $\delta$  profile of the lower side of the curve. 100 diameters.
- Fig. 9. View similar to fig. 4, from the same ephyra as fig. 2. The letters as in fig. 4 excepting  $\epsilon$ , which is the outer wall of a very young lobule developing between the larger ones;  $\rho$  cavity of the young lobule ( $\epsilon$ );  $\tau$  groups of lasso-cells. 100 diameters.
- Fig. 10. Cellular tissue from the proboscis of an adult *Aurelia*, treated with alcohol. 500 diameters.
- Fig. 11. The eye and the immediate organs, seen obliquely from the outer end. In addition to the general lettering, there is  $a$  the entrance to  $d'$ ;  $\beta$  the dorsal side of the external half of  $d'$ ;  $\gamma$  profile of the wall at the bend of  $d'$ ;  $\epsilon$   $\zeta$  the wall of  $d'$ . 200 diameters.
- Fig. 12. The same as fig. 10, but in a natural state. 500 diameters.
- Fig. 13. Similar to fig. 3, but from fig. 5. The figures 1 2 3 refer to the tentacles, from the oldest to the youngest. Lettering as in fig. 2, with this difference, that  $\xi$  is seen through the tentacles;  $\tau$  where the outer wall of the tentacles passes into that of its neighbor. 100 diameters.
- Fig. 14. Profile sectional view of the walls of the hydra stem of *Coryne mirabilis*.  $a$  the horn-like sheath;  $b$  cells of the outer wall;  $b'$  mesoblast of  $b$ ;  $c$  the same as  $b$ , seen in the distance;  $d$  cells of the inner wall;  $d'$  brown cells;  $e$  the same as  $d$ , in the distance. 500 diameters.
- Fig. 15. A lasso-cell from the outer wall of fig. 14.
- $a$  the cell wall;  $b$  the straight part of the thread;  $c$   $d$   $e$  the first, second, and third coils;  $f$  aperture of the cell and base of  $b$ . 2,000 diameters.

## PLATE XII.

PELAGIA CYANELLA, *Pér.* and *LeS.*

[Drawn from nature by J. Burekhardt.]

- Fig. 1. Profile view, natural size.
- Fig. 2. View from below, the mouth appendages being removed.  $a$  arms;  $b$  ovaries;  $c$  mouth;  $d$  tentacles;  $e$  eyes.
- Fig. 3. View from above.  $a$  eyes;  $b$  chymiferous tubes;  $c$  digestive cavity;  $d$  tentacles.
- Figs. 4 to 16. Planulae and ephyra of the same.
- Fig. 4. Young planula, seen in profile.
- Fig. 5. Older planula, seen in profile.
- Figs. 6 and 7. Older planula, seen from above, and in profile.
- Figs. 8 and 9. Passage of the planula into the ephyra, in profile fig. 8, and from below fig. 9.
- Figs. 10 and 11. Young ephyra, in profile and from below.
- Fig. 12. Older ephyra, from below.  $c$  mouth;  $b$  eyespecks;  $a$  position of the tentacles at a more advanced period.
- Fig. 13. Magnified spheromere in connection with the mouth.  $a$  chymiferous lobes;  $b$  eye;  $c$  mouth.
- Figs. 14 and 15. Magnified eyes.  $a$  eye proper;  $b$  chymiferous tube of the eye.
- Fig. 16. Magnified mouth, still simple and without arms.

PLATES XIII. and XIII<sup>a</sup>.POLYCLONIA FRONDOSA, *Ag.*

[Drawn from nature by J. Burekhardt.]

PLATE XIII. Profile view and various structural details of *Polyclonia frondosa*.

- Fig. 1. Profile view of our *Polyclonia* (the *Medusa frondosa* of Pallas), with the oral appendages drawn up under the disk.
- Fig. 2. The same, seen from below, different parts being removed in different segments and shown in a different condition in each.  $o$   $o$  eyes, twelve in number. In segments 1 and 2 may be seen the two branches of one arm with their marginal lobes entire, and